ENERGY STAR® Program Requirements for Dehumidifiers

Eligibility Criteria

Below is the product specification for ENERGY STAR qualified dehumidifiers. A product must meet all of the identified criteria if it is to be labeled as ENERGY STAR by its manufacturer.

1) Definitions: Below is a brief description of dehumidifiers and common energy consumption characteristics relevant to ENERGY STAR.

   A. Dehumidifier: A dehumidifier is a self-contained, electrically operated, and mechanically refrigerated encased assembly consisting of (a) a refrigerated surface (evaporator) that condenses moisture from the atmosphere; (b) a refrigerating system, including an electric motor; (c) an air-circulating fan; and (d) means for collecting and/or disposing of the condensate. [1]

   B. Energy Factor: The energy efficiency of dehumidifiers will be measured in liters of water removed per kilowatt-hour (kWh) of energy consumed at standard test conditions. This metric is defined as the energy factor. Energy factor will be calculated according to the test procedure listed in Section 4.

   C. Capacity: Capacity refers to water removal capacity at standard test conditions, measured in liters. Capacity will be calculated according to the test procedure listed in Section 4.

2) Qualifying Products: For the purposes of ENERGY STAR, dehumidifiers include the following:

   A. Standard Capacity Dehumidifiers: Dehumidifiers with daily water-removal capacities up to 35 Liters (74.0 US pints).

   B. High Capacity Dehumidifiers: Dehumidifiers with daily water-removal capacities up to 57 Liters (120.5 US pints).

3) Energy-Efficiency Specifications for Qualifying Products: Only those products listed in Section 2 that meet the criteria outlined in Table 1 or Table 2 below may qualify as ENERGY STAR.

Table 1: Criteria for ENERGY STAR Qualified Standard Capacity Dehumidifiers

Product Capacity (L/day)	**Energy Factor Under Test Conditions (L/kWh)**
L/day < 10	$\geq$ 1.20
10 $\leq$ L/day < 25	$\geq$ 1.30
25 $\leq$ L/day $\leq$ 35	$\geq$ 1.50

[1] Source: *Performance of Dehumidifiers, National Standard of Canada* CAN/CSA-C749-94. Ontario, Canada 1994.

Table 2: Criteria for ENERGY STAR Qualified High Capacity Dehumidifiers	
Product Capacity (L/day)	**Energy Factor Under Test Conditions (L/kWh)**
36 ≤ L/day ≤ 57	≥ 2.25

4) Test Criteria: Tests shall be conducted in accordance with Clauses 4, 5, and 7 of ANSI/AHAM Standard DH-1, except that a watt-hour meter shall be used to measure dehumidifier energy consumption during the capacity rating test. The watt-hour meter shall be accurate within 0.5 percent of the indicated value and have a scale with graduations of 1 watt-hour or less. Energy Factor is to be calculated according to Section 4.2 of CAN/CSA-C749-94.

5) Effective Date: The date that manufacturers may begin to qualify products as ENERGY STAR will be defined as the *effective date* of the agreement. The ENERGY STAR Dehumidifier specification is effective on January 1, 2001.

6) Future Specification Revisions: ENERGY STAR reserves the right to revise the specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. Revisions to the specification are generally made following discussions with industry.

   Approximately two years after the specification announcement, ENERGY STAR will thoroughly assess the impact of the original specification in order to evaluate the level at which its partners have performed. A Tier 2 set of specifications may be issued to recognize those manufacturers who have gone beyond the original energy-efficiency limits. Similar to Tier 1, the new criteria would be selected such that the top 25 percent of the market in terms of energy efficiency qualifies initially for the label. Models produced under the Tier 1 guidelines would be allowed to carry the ENERGY STAR label until they are phased out of the market, assuming the manufacturer continues its participation in the program and the product model continues to meet the specifications under which it was originally qualified (i.e., new specifications would not apply retroactively to previously qualified products). Once the Tier 2 specifications took effect, models shipped on or after that date would be required to meet the new specifications in order to use the ENERGY STAR label.